

[CLAIMS]

1. A cassette assembly comprising an X-ray cassette, with a tube side and a cover, and an intensifying screen characterized that said cassette assembly further comprises a compensation element adapted to said intensifying screen so as to have a cassette assembly with predetermined X-ray absorption.
2. A cassette assembly according to claim 1, wherein only one intensifying screen is present.
3. A cassette assembly according to claim 1, wherein said compensation element is incorporated in said cover of said X-ray cassette.
4. A cassette assembly according to claim 1, wherein said compensation element is a foil added between said intensifying screen and said cover.
5. A cassette assembly according to claim 4, wherein said foil is made from a polymeric material that comprises at least 50 mole % of polymeric moieties incorporating an element with an atomic weight larger than 20.
6. A cassette assembly according to claim 5, wherein said foil is made from polyvinylchloride.
7. A cassette assembly according to claim 4, wherein said foil comprises a pigment selected from the group consisting of inorganic compounds comprising atoms with an atomic weight equal to or higher than 40.
8. A cassette assembly according to claim 7, wherein said pigment is selected from the group consisting of alkaline earth compounds, Zn compounds, rare earth compounds, compounds comprising tungsten, compounds comprising tantalum, and titanium compounds.

9. A cassette assembly according to claim 7, wherein said pigment is selected from the group consisting of ZnO, BaSO₄, CaWO₄, PbO, Gd₂O₂S, YTaO₄, BaFBr, LaOBr, ZnS and TiO₂.

10. A cassette assembly according to claim 7, wherein said foil is selected from the group consisting of a SWP foil with a thickness between 5 and 200 μm and a polymeric foil coated with a dispersion of CaWO₄ in an amount between 0.1 and 3 mg/cm².

11. A cassette assembly according to claim 1, wherein said compensation element is a layer applied to said intensifying screen.

12. An X-ray intensifying screen comprising an opaque support carrying on one side a phosphor layer comprising a prompt emitting phosphor and on the other side of the support a layer containing an X-ray absorbing pigment selected from the groups consisting of alkaline earth compounds, Zn compounds, rare earth compounds, compounds comprising tungsten, compounds comprising tantalum, and titanium compounds.

13. An X-ray intensifying screen according to claim 12, wherein said pigment is selected from the group consisting of ZnO, BaSO₄, CaWO₄, PbO, Gd₂O₂S, YTaO₄, BaFBr, LaOBr, ZnS and TiO₂.

14. A method for radiography, comprising the steps of :

- providing a cassette with a front and back side containing an intensifying screen near said backside and an X-ray film with an emulsion layer in contact with said intensifying screen and a compensation element between said intensifying screen and said backside,
- exposing a patient, placed between an X-ray source and said front side of said cassette, by having said X-ray source emitting X-rays,
- registering an X-ray dose in a phototimer placed behind said backside of said cassette and
- having said phototimer end said exposure of said patient when a threshold X-ray dose has been absorbed by said phototimer.

15.A method according to claim 14, wherein said X-ray source emits X-rays having an energy between 20 and 50 kVp.